



Missouri Department of dnr.mo.gov
NATURAL RESOURCES

Michael L. Parson, Governor

Carol S. Comer, Director

AUG 20 2019

Mr. Jesse Nickrand
EHS Manager, Americas
Modine Manufacturing Company
1500 DeKoven Avenue
Racine, WI 53403-2552

RE: Sitewide Investigation, Phase 2 Soil Investigation Report for 221 Sunset Drive
Modine Manufacturing Company, Camdenton, Missouri
EPA ID# MOD062439351

Dear Mr. Nickrand:

The Missouri Department of Natural Resources' Waste Management Program (WMP), in consultation with the Missouri Department of Health and Senior Services, reviewed the Sitewide Investigation, Phase 2 Soil Investigation Report for 221 Sunset Drive, dated March 18, 2019. Modine Manufacturing Company (Modine) submitted the draft report, via e-mail, as required by Code of State Regulations 10 CSR 25-7.264(1), which incorporates Code of Federal Regulations 40 CFR Part 264.101, and Section VI. of Modine's Administrative Order on Consent, dated July 1999. This Report discusses the results from subsurface soil sampling beneath the former manufacturing building.

We have enclosed comments and requests for additional information for your review and response. You must adequately address these comments before the Report can be approved. Please address the individual comments by submitting 2 paper copies and 1 searchable electronic copy of the revised Report to the WMP within 60 calendar days of receiving this letter. If Modine determines additional time is necessary to prepare an appropriate response, you must submit a written extension request to the WMP at least 15 calendar days before the scheduled submittal date.

If you need assistance or have questions regarding this letter or the enclosed comments, please contact me at the Missouri Department of Natural Resources, 7545 South Lindbergh Boulevard, Suite 210, St. Louis, MO 63125-4839, by telephone at 314-416-2464 or 1-800-361-4827, or by e-mail at christine.kump@dnr.mo.gov. Thank you.

Sincerely,

WASTE MANAGEMENT PROGRAM

Christine Kump-Mitchell

For Christine Kump-Mitchell, P.E.
Environmental Engineer
Engineering Section

CKM:lg

Enclosure

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RCRA



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Recycled paper

Mr. Jesse Nickrand

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c: Mr. Robert Aston Jr., R.G., Missouri State Coordinator, U.S. EPA Region 7
Ms. Michelle Hartman, Missouri Department of Health and Senior Services
Ms. Monica Schneider, Project Manager, CH2M
Southwest Regional Office, Missouri Department of Natural Resources
Mr. Kyle Anderson, Environmental Remediation Program

Comments

1. **General Comment:** The conceptual site model and risks at the site have changed significantly since submittal of the 2009 Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI) Report. Therefore, the Phase 1 Sitewide Investigation Report, Phase 2 Sitewide Investigation Report, and the Residential Vapor Investigation Results Reports constitute the Revised RFI. The Revised RFI should include an updated conceptual site model and an updated human health risk assessment.
2. **Section 2.2 Close Circuit Television (CCTV) Investigation, Page 2-1:** Please provide a short description of the CCTV investigation procedures.
3. **Section 3, Results, Page 3-1:** Since the passive soil gas (PSG) sampling results were presented in the Phase 1 Sitewide Soil Vapor Investigation Report, 221 Sunset Drive (Phase 1 Report), they are not presented again in this Report. However, the Department of Health and Senior Services recommends a figure of the PSG results be included as reference in this document. Additionally, perhaps it would be beneficial to include a figure showing the trichloroethene (TCE) soil concentrations in relation to the PSG results.
4. **Section 3.1 Volatile Organic Compounds, Page 3.1 and Table 3.2 Soil Analytical Results:** In this table and throughout the text of the document, comparison for TCE is made to the Environmental Protection Agency (EPA) Regional Screening Level (RSL) for Industrial Soil of 6 milligrams per kilogram (mg/kg). Comparisons for screening purposes should be made to the lower of a target cancer risk of $1E-6$ or a non-cancer hazard quotient of 0.1; therefore, the comparison value should be set at 1.9 mg/kg. Please revise the text, table, and figures accordingly.
5. **Section 3.1 Volatile Organic Compounds, Page 3-1:** In addition to comparing to the Industrial Soil RSL for each chemical, comparison should also be made to soil saturation limit (C_{sat}) and to soil migration to groundwater screening levels. Text related to this comparison and results should also be incorporated into the document.
6. **Section 4.3.1 Volatile Organic Compounds, Page 4-3, 3rd Paragraph:** The highest detections of TCE occurred in soil boring SB-327. This boring is located near a former vapor degreaser and is within the 1970-1971 building addition. SB-327 was advanced to 27 feet below ground surface (fbgs) and does not extend to bedrock. While the horizontal extent of TCE contamination within the building is defined, the vertical extent of TCE contamination at and surrounding SB-327 has not been completely characterized. The data collected provides an adequate basis for moving forward with evaluation of remedial strategies. However, additional sampling, as part of the Corrective Measures Study (CMS), may be necessary to ensure the selected remedy/remedies are appropriately designed to remove TCE contamination at depth.
7. **Section 4.3.1 Volatile Organic Compounds, Page 4-3, 4th Paragraph:** Soil borings SB-331, SB-333, and SB-324/SB-324A are located along the west wall on the inside of the building. Soil borings SB-334, SB-335, SB-336 and SB-337 are located around the outside of the pretreatment room along the west side of the building. SB-324A was completed to a depth of 39 fbgs. TCE was detected in SB-324 at a concentration of 18.7 mg/kg at 35 fbgs. TCE was detected in SB-335 at a concentration of 0.935 mg/kg at a depth of 37 fbgs. TCE was detected in SB-337 at concentrations of 7.1 and 5.45 mg/kg at 8 and 13 fbgs, respectively. However, SB-337, which is located immediately west of SB-324, was only sampled to a depth of 13 fbgs. Soil borings SB-334 and SB-336 also terminate before reaching bedrock. The vertical extent of TCE contamination outside the

pretreatment room of the manufacturing building has not been completely characterized to applicable screening levels. Additional sampling to bedrock is required to determine the vertical extent of contamination as part of the CMS.

8. **Figure 4-2 Cross-Section D-D', Figure 4-3 Cross Section E-E', and Figure 4-4 Cross-Section F-F':** Cross-section A-A' in the Phase 1 Report is orientated from west to east, and cross-section D-D' in the Phase 2 Report is orientated from east to west. Similarly, cross-sections B-B' and C-C' in the Phase 1 Report are orientated from south to north, and cross-sections E-E' and F-F' are orientated from north to south in the Phase 2 Report. This discrepancy in cross-section orientation makes it difficult to compare the site geology between the two Reports. Cross-sections A-A' and D-D' should be orientated from west to east, and cross-section B-B', C-C', E-E', and F-F' should be orientated from north to south.
9. **Figure 4-5 TCE Isoconcentrations in Soil:** This figure represents horizontal extent of TCE in soil using maximum concentration of TCE in soil at each boring location. Although TCE concentrations in soil are presented on Figure 3-1, a visual representation of the vertical extent of TCE in soil should also be provided. This can be achieved by either providing isoconcentration maps for multiple depths or showing isoconcentration lines on the cross sections. If isoconcentration lines are depicted in the cross-sections, then soil boring SB-327 should be included in one of the cross-sections.
10. **Figure 4-5 TCE Isoconcentrations in Soil:** Please revise this figure to include isoconcentration lines representing 1.9, 6, 20, 50, and 100 mg/kg.